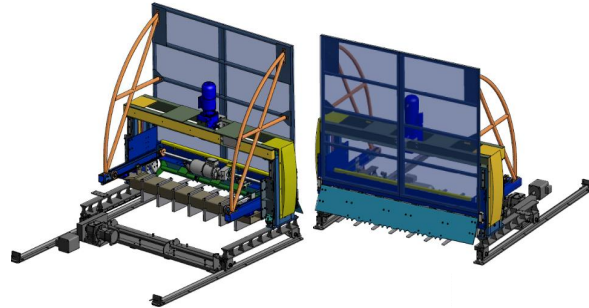




## LOAD PALLETISING DEVICE (LPD)

### STANDARD – SINGLE LOAD



#### Operational Overview

The device is designed to square; centre and lift finished loads for placement on pallets. Constructed from high quality components and assemblies the fastpal LPD is design for a long, low maintenance life.

The following features are standard on the LPD: -

- Precision, long life V – guide tracks for the squaring heads.
- Vector drives for all axis of movement and stack centring and squaring by servo control.
- Precision rack and pinion lift guides.
- Mechanical pallet centring/squaring mechanism.
- The device utilises digital drives and advanced positioning system
- Diagnostics are included to pinpoint problems. These diagnostics include an alphanumeric display to insure user friendliness.
- Pusher entry device with servo drives for smooth and precise pallet insertion. All pallets are measured as they enter for precise stack/pallet positioning.
- Controls are provided for the device for automatic operation along with manual push-button controls.
- Active Turn-up plates to prepare base sheets for strapping.
- Automatic load centring.
- GRP sandwich squaring boards for improved stack quality.

#### Specification:

<b>Products:</b>	Unit loads of corrugated sheets, boxes or diecuts built on base sheets
<b>Size:</b>	Max load size 2000mm wide x 2400mm long Min load size 800mm wide x 800mm long Min stack height 400mm All stacks have "turn up" sheets
<b>Load Weight:</b>	Max load 1000kg
<b>Pallet Sizes:</b>	Maximum Pallet size: 1550mm Wide x 2000mm Long Maximum Pallet Height: 180mm
<b>Conveyor Speed:</b>	Nominal Conveyor Speed 15m/m
<b>Rate:</b>	No rating for product flow rate
<b>Performance:</b>	160 Loads/Hour for single pallet operation.
<b>Stack/Pallet Position Accuracy:</b>	Better than +/- 10mm subject to pallet being square



## FASTPAL (FP)

### FASTPAL PALLET ROBOT



#### Operational Overview

The system utilises an overhead power transfer device travelling on a floor supported track. The device is equipped with a pneumatically actuated pallet clamp which senses pallet height. The device will pick-up the top pallet from a stack for delivery to the Load Palletising device (LPD). Pallets will be stacked two strand chain conveyor. Clamping is by four independent air cylinders which clamp first from the front and The device will collect two pallets from a stack when Double or Quad pallet mode is required.

The device has the following features:-

- Automatic controls - When signalled, the device will pick-up a pallet from the selected location and deliver it to the load palletising device. Touch screen controls are included for manual operation.
- Controlled acceleration and deceleration for precise positioning via servo controls
- Physical over travel stops in addition to software travel limits at each end of system inhibit device from exceeding travel limits.
- Precision rack and pinion drive system
- Pallet range: - TBC.
- Double Pallet pick-up. Is/Is not included
- Double Pallet placing in the pallet centraliser. Is/is not included
- Quad Pallet placing mode available both with single and double pallet cycles. Is/is not included

#### Specification:

<b>Products:</b>	Pallets (wooden or plastic)
<b>Size:</b>	Requirement of Customer
<b>Load Weight:</b>	Conveyor maximum Load Weight 425kg/m <sup>2</sup> Pallet Lift maximum load weight 40kg
<b>Pallet Sizes:</b>	Maximum Pallet size: 1550mm Wide x 2000mm Long x 180mm High x 40Kg Min 800 Wide x 110mm High
<b>Device Speed:</b>	Horizontal - Up to 2m/second, Vertical – Up to 1.6m/second
<b>Electrical:</b>	Allen Bradley or Siemens PLC and Servo Drives.
<b>Rate:</b>	No rating for product flow rate
<b>Pallet Lift:</b>	Double pallet lift capability available dependent on total load. Pallet rotation available
<b>Performance:</b>	Max 160 Loads/Hour for single pallet operation. Lower cycle on multiple pallets
<b>Double Pallet Detector:</b>	For standard units with single pallet pickup, the fastpal head is fitted with a double



## PALLET LINES FOR FASTPAL (PAM)

### CHAIN CONVEYOR FOR PALLET DELIVERY TO FASTPAL DEVICE



#### Operational Overview

The two chain conveyor is uni-directional. The unit can carry multiple stacks with gaps between stacks. To achieve this photoelectric sensors will be installed for load measuring and load sensing and a PLC program to control the movements.

Stacks of pallets are entered on to the line at the upstream end. If the next downstream conveyor is clear the load will move to this conveyor. If the downstream conveyor is blocked, then loads will begin to accumulate in a forward accumulation mode. Avanti maintain a definable gap between each unit load, typically 200mm. This gap enables correct measurement of stacks to another conveyor or shuttle/transfer car.

If removal of stacks is by forklift truck is required then a roller conveyor is provided with cut outs between rollers at the fork truck fork pitch. A PE detects if the FLT is present and prevents the conveyor from moving while it is in place.

If the two chain conveyor is used with an Avanti fastpal, stacks of pallets will be placed on the entry end of the line by a forklift truck and move down on the chains to the end of the line and will be picked off by the fastpal pallet gripper. When one stack is used up another will move down to the pallet pick up end. Three photoelectric cells are necessary in addition to the fastpal PLC program and iMPRESS computer programs.

#### Specification:

<b>Products:</b>	Rigid loads at least 200mm wider than the conveyor chains. This can be pallets, boards or other stacks
<b>Conveyor Height:</b>	310mm top of chains unless otherwise stated
<b>Conveyor Speed:</b>	Nominal conveyor speed 15m/m
<b>Conveyor Width:</b>	600mm to 900mm Wide
<b>Conveyor Length:</b>	3750mm long
<b>Rate:</b>	Depends on conveyor dimensions. For a 4m length about 200 stacks/hr
<b>Drives:</b>	Option for VFD or DOL
<b>Load Building:</b>	Forward Only with Gaps
<b>Electrical:</b>	400v 3Phase 50Hz
<b>Chain:</b>	¾" Simplex Chains
<b>Capacity Weight:</b>	750Kgs for a 3500mm length of 1000mm wide. Others depend on conveyor length, width and motor size.
<b>Stack Height</b>	The stack height and number of pallets per stack is dependent on the FastPal Vertical axis configuration and roof height.



# INSPIRE AUTOMATION

## Fastpal Load Palletising Device Specifications

	UNO		DUO		Tandem		Monster	
Stacks / Cycle	1	1	2 same	1	2 different	1	2 same	
Maximum Load Length	2500	3200	1400	5200	2500	4800	1800	
Maximum Load width	2100	2100	2100	2500	2500	2800	2800	
Maximum Load Height	2000"	2000"	2000"	2000"	2000"	2000"	2000"	
Minimum Load Length	500	500	500	500	500	500	500	
Minimum Load Width	500	500	500	500	500	500	500	
Minimum Load Height	400"	400"	400"	400"	400"	400"	400"	
Maximum load weight (Total) Kg								
Stacks / hour	160	150	220	160	240	120	180	
Maximum Pallet length	2000"	2400	1200	2000"	2000	2400	2200	
Maximum Pallet Width	2000	2000	2000	2000	2000	2400	2400	
Maximum Pallet Height	200	200	200	200	200	200	200	
Minimum Pallet Length	600	600	600	600	600	600	600	
Minimum Pallet Width	500	500	500	500	500	500	500	
Minimum Pallet Height	110	110	110	110	110	110	110	
Maximum Pallets / cycle	1"	2	4	1"	2	8	4	
Minimum Pallet runner width	50"	50"	50"	50"	50"	50"	50"	
<b>OPTIONS</b>								
Two Pallet Mode	Y	NR	NR	Y	Y	NR	NR	
High Accuracy Positioning Mode	Y	X	X	Y	Y	X	X	
High Accuracy Pallet height seek	Y	Y	X	Y	Y	X	X	
Edge or Corner Justification Mode	Y	Y	X	Y	Y	Y	X	
High Stack (2.5m)	Y	Y	Y	Y	Y	Y	Y	
Pneumatic Pallet Stabiliser	Y	Y	Y	Y	Y	X	X	
Mechanical Pallet Centring	Y	X	X	Y	Y	X	X	
PLC Allen Bradley	Y	Y	Y	Y	Y	Y	Y	
PLC Siemens	Y	Y	Y	Y	Y	Y	Y	
Low load Cycle	Y	Y	Y	Y	Y	X	X	
Flat Base Conveying	Y	X	X	Y	Y	X	X	
Product defined Squaring pressure	Y	Y	X	Y	Y	X	X	

